

ABSTRACT OF THE DISCLOSURE

A seal with integrated sealing and rotation measuring capabilities installed on the wheel support bearing assembly on an automotive vehicle that comprises a rotational bearing element and a non-rotational bearing element rotating relative to each other, and provides rotation detection capability for detecting the number of revolutions as well as sealing capability for sealing the wheel support bearing assembly.

The seal with integrated sealing and rotation measuring capabilities comprises a first slinger having an L-shape cross section and adapted to be fixed to the rotational bearing element of the bearing assembly, the first slinger including a first cylindrical portion extending axially and a first flanged portion extending radially from the first cylindrical portion, a seal ring arranged axially inward from the first slinger and adapted to be secured to the non-rotational bearing element, the seal ring having elastic seal lips having respective tips adapted to make sliding contact with the side of the first slinger facing opposite to the seal ring, and a second slinger having an L-shape cross section arranged axially inward from the said seal ring and adapted to be fixed to the rotational bearing element, the second slinger including a second cylindrical portion extending axially and a second flanged portion extending radially from the second cylindrical portion.

The seal with integrated sealing and rotation measuring capabilities further includes an encoder actuated magnetically to generate pulses and arranged on the second flanged portion in the second slinger, and a sensor arranged on the seal ring to face opposite to the encoder for responding to the pulses from the encoder.